

What is claimed is:

1. A control method for a premixed compression ignition internal combustion engine in which a gaseous mixture of an oxygen-containing gas and a fuel is compressed and self-ignited within a cylinder, wherein cyclohexene is mixed with the fuel to be supplied to said premixed compression ignition internal combustion engine, and the mixing amount of cyclohexene is changed according to the operating conditions of said internal combustion engine.

2. The control method for a premixed compression ignition internal combustion engine according to claim 1, wherein said premixed compression ignition internal combustion engine has first supply means for supplying a first fuel and second supply means for supplying a second fuel that contains cyclohexene and whose self-ignition delay time is set so as to be longer than that of said first fuel, and

the supply amount of the first fuel supplied from the first supply means and the supply amount of the second fuel supplied from the second supply means are changed according to the operating conditions of said internal combustion engine.

3. The control method for a premixed compression ignition internal combustion engine according to claim 2, wherein the first fuel consists of fuels other than cyclohexene.

4. The control method for a premixed compression ignition internal combustion engine according to claim 2, wherein the supply amounts of the first and second fuels are changed respectively so that when said premixed compression ignition internal combustion engine is operated at higher loads, the ratio of said first fuel to all fuel supplied to said internal combustion engine decreases, and the supply amounts of the first and second fuels are changed respectively so that when said premixed compression ignition internal combustion engine is operated at lower loads, the ratio of said first fuel to all fuel supplied to said internal combustion engine increases.